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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2015/2016

**BAC3674 – ADVANCED MANAGEMENT ACCOUNTING**  
(B01)

13 OCTOBER 2015  
2.30 PM – 5.30 PM  
(3 HOURS)

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### INSTRUCTIONS TO STUDENT

1. This question paper consists of **6 pages** (exclusive of cover page) only.
2. **Answer ALL FIVE (5) questions.** All questions carry equal marks and the distribution of the marks for each question is given.
3. Please provide all your answers in the Answer Booklet provided.

**QUESTION 1**

Candid Enterprise manufactures webcams, devices which can provide live video and audio streams via personal computers. It has recently been suffering from liquidity problems and hopes that these will be eased by the launch of its new webcam, which has revolutionary audio sound and visual quality. The webcam is expected to have a product life cycle of two years. Market research has already been carried out to establish a target selling price and projected lifetime sales volumes for the product. Cost estimates have also been prepared, based on the current proposed product specification. Candid Enterprise uses life cycle costing to work out the target costs for its products, believing it to be more accurate to use an average cost across the whole lifetime of a product, rather than potentially different costs for different years. You are provided with the following relevant information for the webcam:

Projected lifetime sales volume	50,000 units
Target selling price per unit	RM200
Target profit margin (35% selling price)	RM 70
Target cost per unit	RM130
Estimated lifetime cost per unit (see note below for detailed breakdown)	RM160

Note: Estimated lifetime cost per unit:

	RM	RM
<u>Manufacturing costs:</u>		
Direct material (bought in parts)	40	
Direct labour	26	
Machine costs	21	
Quality control costs	10	
Rework costs	<u>3</u>	100
<u>Non-manufacturing costs:</u>		
Product development costs	25	
Marketing costs	<u>35</u>	<u>60</u>
Estimated lifetime cost per unit		<u>160</u>

The average market price for a webcam is currently RM150.

The company needs to close the cost gap of RM30 between the target cost and the estimated lifetime cost. The following information has been identified as relevant:

- i. Direct material cost: all of the parts currently proposed for the webcam are bespoke (custom made) parts. However, most of these can actually be replaced with standard parts costing 55% less. However, three of the bespoke parts, which currently account for 20% of the estimated direct material cost, cannot be replaced, although an alternative supplier charging 10% less has been sourced for these parts.

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- ii. Direct labour cost: the webcam uses 45 minutes of direct labour, which costs RM34.67 per hour. The use of more sophisticated and highly advanced technological parts, however, reduces the timely hours spent for production to 20 minutes.
- iii. Rework cost: this is the average rework cost per webcam and is based on an estimate of 15% of webcams requiring rework at a cost of RM20 per rework. With the use of more standard parts, the rate of reworks will fall to 10% and the cost of each rework will fall to RM18.

Required:

- a) Recalculate the estimated lifetime cost per unit for the webcam after taking into account points (i), (ii) and (iii) above.  
(9 marks)
- b) Based on your answer in (a), is the new estimated lifetime cost per unit acceptable?  
(1 mark)

Candid Enterprise uses a four stage life cycle model (Introduction, Growth, Maturity and Decline). The management of this company decided that it would be appropriate to adopt a market skimming pricing policy for the launch of its new webcam. However, Candid Enterprise expects that other companies will try to join the market very soon.

This product is currently in the introduction stage of its life cycle and is generating significant unit profits. However, there are concerns that these current unit profits will not continue during the other stages of the product's life cycle.

- c) Explain, with reasons, the changes, if any, to the unit selling price and the unit production cost that could occur when the product moves from the previous stage into each of the following stages of its life cycle:
  - i. Growth
  - ii. Maturity

(10 marks)

**[TOTAL: 20 MARKS]**

## QUESTION 2

Jemari Mart, a chain of small neighbourhood convenience stores, is preparing its activity-based budget for November 2015. Jemari Mart has three product categories: soft drinks (35% of cost of goods sold [COGS]), fresh produce (25% of COGS) and packaged food (40% of COGS). The following table shows the four activities that consume indirect resources at the store, the cost drivers and their rates, and the cost-driver amount budgeted to be consumed by each activity in November 2015.

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Activity	Cost driver	Cost driver rate (RM)	Budgeted cost driver used		
			Soft drinks	Fresh snacks	Packaged food
Ordering	No of purchase order	45	14	24	14
Delivery	No of deliveries	41	12	62	19
Shelf stocking	Hours of stocking time	10.50	16	172	94
Customer support	No of items sold	0.09	4,600	34,200	10,750

Required:

- Compute the budgeted indirect cost of each product category and the total budgeted indirect cost in November 2015. (6 marks)
- Which product category has the largest fraction of total budgeted indirect costs? Compare your finding with the percentage of cost of goods sold given above and explain the reason(s) of difference. (4 marks)
- How does preparing the budget help Jemari Mart's management team better manage the company? (10 marks)

[TOTAL: 20 MARKS]

### QUESTION 3

JMM is a car manufacturer. It is a relatively new company and the directors are keen to establish a reputation for high quality. The management of JMM recognises the need to establish a culture of Total Quality Management (TQM) at the company.

The management accounting team at JMM has collected the following actual information for the most recent quarter of the current year:

Cost data:

	RM
Customer support centre cost per hour	58
Equipment testing cost per hour	30
Manufacturing rework cost per car	380
Warranty repair cost per car	2,600

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**Volume and activity data:**

Cars requiring manufacturing rework	800 cars
Cars requiring warranty repair	650 cars
Customer support centre time	500 hours
Production line equipment testing time	400 hours

**Additional information:**

JMM undertook a quality review of its existing suppliers during the quarter at a cost of RM60,000. Due to the quality issues in the quarter, the car production line experienced periods of unproductive 'down time' which cost RM375,000.

**Required:**

- Produce a Cost of Quality report for JMM using the four recognised quality cost headings.  
(6 marks)
- Explain how a Cost of Quality report would support the development of a TQM culture at JMM.  
(8 marks)
- What are the primary goals of Just in Time (JIT) philosophy, and how does JIT attempt to achieve these goals? Is JIT philosophy coherent with TQM culture?  
(6 marks)

**[TOTAL: 20 MARKS]****QUESTION 4**

The football division of Harmony Sports manufactures and sells footballs. Assume production equals sales. Budgeted data for December 2015 are as follows:

Current assets	RM400,000
Long-term assets	<u>RM600,000</u>
Total assets	<u>RM1,000,000</u>
Production output	200,000 footballs per month
Target ROI (Operating income ÷ Total assets)	30%
Fixed costs	RM400,000 per month
Variable cost	RM4 per football

**Required:**

- Compute the minimum selling price per football necessary to achieve the target ROI of 30%.  
(3 marks)
- Using the selling price from (a), separate the target ROI into its two components using the DuPont method.  
(2 marks)

**Continued...**

- c) Compute the Residual Income (RI) of the football division for December 2015, using the selling price from requirement (a). Harmony Sports uses a required rate of return of 12% on total division assets when computing division's RI. (2 marks)
- d) In addition to his salary, Ahmad, the division manager, receives 3% of the monthly RI of the football division as a bonus. Compute Ahmad's bonus. (1 mark)
- e) Explain the disadvantages of using financial performance indicators alone to assess performance. (4 marks)
- f) Harmony Sports are thinking about implementing a Balanced Scorecard approach to performance management. Explain TWO different perspectives of the Balanced Scorecard with illustration of TWO non-financial performance measures for each perspective. (8 marks)

**[TOTAL: 20 MARKS]**

## QUESTION 5

### PART A

Gembira Company manufactures and sells television sets. Its assembly division (AD) buys television screens from the screen division (SD) and assembles the TV sets. The SD, which is operating at full capacity, incurs an incremental manufacturing cost of RM65 per screen. The SD can sell all its output to the outside market at a price of RM100 per screen, after incurring a variable marketing and distribution cost of RM8 per screen. If the AD purchases screens from outside suppliers at a price of RM100 per screen, it will incur a variable purchasing cost of RM7 per screen. Gembira's division managers can act autonomously to maximise their own division's operating income.

Required:

- a) What is the minimum transfer price at which the SD manager would be willing to sell screens to the AD? (2 marks)
- b) What is the maximum transfer price at which the AD manager would be willing to purchase screens from the SD? (2 marks)
- c) Now suppose that the SD can sell only 70% of its output capacity of 20,000 screens per month on the open market. However the capacity cannot be reduced in the short run. The AD can assemble and sell more than 20,000 TV sets per month.
- i. What is the minimum transfer price at which the SD manager would be willing to sell screens to the AD? (3 marks)

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- ii. From the point of view of Gembira's management, how much of the SD output should be transferred to the AD?

(3 marks)

### **PART B**

Certain production equipment used by Campur Chemical has become obsolete relative to current technology. The company is considering whether it should keep or replace its existing equipment. To aid in this decision, the company's controller gathered the following data:

	<b>Old equipment</b>	<b>New equipment</b>
Original cost	RM350,000	RM396,000
Remaining life	5 years	5 years
Accumulated depreciation	RM158,000	-0-
Annual cash operating cost	RM64,000	RM16,000
Current salvage value	RM88,000	NA
Salvage value in 5 years	-0-	-0-

Required:

- a) Identify any sunk costs in the data. (1 mark)
- b) Identify any irrelevant (non-differential) future costs. (1 mark)
- c) Identify all relevant costs to the equipment replacement decision. (2 marks)
- d) What are the opportunity costs associated with the alternative of keeping the old equipment? (1 mark)
- e) What is the incremental cost to purchase the new equipment? (2 marks)
- f) What qualitative factors should be considered before making any decision? (3 marks)

**[TOTAL: 20 MARKS]**

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